**Amendments to the Claims**:

The listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims**:

Claim 1.     (Currently Amended)     A method for preventing vehicle rollover for a vehicle traveling on a road, said method comprising:

for each present position of said vehicle as [[it]] said vehicle travels on said road, forecasting future speed of said vehicle as a function of future position of said vehicle on said road, for a plurality of points that are distributed throughout a segment of said road forward of said vehicle, based on an assumption regarding a driving style behavior of a driver an operator of said vehicle relative to , and based on a map containing road geometry data and statistical speed data for vehicles traveling said road, and based on road geometry data contained in a map;

at each said present position of said vehicle, determining a maximum safe speed of said vehicle for each of [[a]] said plurality of points [[on]] in said road segment forward of said vehicle, based on a maximum lateral acceleration, on said road geometry and on physical parameters of said vehicle; and

generating a rollover warning for any current position of said vehicle on said road at which the forecast future speed for at least one particular point on said road <u>segment</u> forward of said vehicle exceeds the determined maximum safe speed at said at least one particular point.

Claim 2.    (Original)    The method according to claim 1, wherein said maximum safe speed is a speed beyond which, based on said road geometry and on said parameters of said vehicle, it is unavoidable that the vehicle will subsequently encounter a lateral acceleration that will cause it to roll over.

Claim 3.    (Original)    The method according to claim 1, wherein said vehicle speed is forecasted based on a model of driving behavior derived from data contained in said map data.

Claim 4.    (Currently Amended)    The method according to claim 3, wherein the future vehicle speed is forecasted based on an assumption that the driver of the vehicle will maintain <u>the speed of the vehicle at</u> the same percentile position relative to <u>said statistical</u> speed data <s>contained in said map</s>, throughout the road <u>segment</u> forward of said vehicle.

Claims 5.-6. (Cancelled)

Claim 8.    (Original)    The method according to claim 2, wherein said maximum safe speed is determined based on curvature of said road at each of said points on said road forward of said present position.

Claim 9. (Currently Amended) The method according to claim 2, wherein said maximum safe speed [[to]] is determined by a cost function that takes into account at least longitudinal speed and lateral acceleration of said vehicle.

Claim 10. (Original) The method according to claim 9, wherein said cost function further takes into account fuel consumption of said vehicle.

Claim 11. (Currently Amended) The method according to claim 1, wherein when, at a first point in time, said forecasted future speed of said vehicle at a particular point location on said road segment forward of said vehicle exceeds the maximum safe speed determined for that particular point location, remedial action is taken at a second point in time which is subsequent to said first point in time, and is determined as a function of at least one of driver reaction time, maximum vehicle deceleration, a minimum time to achieve said maximum vehicle deceleration and a speed cushion.

Claim 12. (Original) The method according to claim 11, wherein:

said remedial action comprises a warning to said driver; and

said warning is given at a point in time such that, after the reaction time, the maximum deceleration will bring the vehicle to the speed cushion below the maximum safe speed at a time t corresponding to particular point.

Claim 13. (Original) The method according to claim 11, wherein said remedial action includes an automatic slowing of the vehicle.

Claim 14. (Original) The method according to claim 1, wherein said statistical speed data contained in said map comprises speed data collected from actual truck operations over roads contained in said map, using GPS data to determine points along said road.

Claim 15. (Original) The method according to claim 14, wherein said map includes data characterizing at least one of vehicle position GPS, GPS error estimates, vehicle speed, measured lateral acceleration, vehicle operating parameters and lane-tracker information.

Claim 16. (Original) The method according to claim 15 wherein:

GPS points are map matched with a commercially available digital map;

a GPS trace is broken into map segments based on said map;

all GPS traces on each segment are collected;

B-splines are fit to said traces to determine a centerline of the road;

curvature along each segment is determined based on a derivative of said splines.

Claim 17.    (Currently Amended)    The method according to claim 1, wherein said future speed of said vehicle and said maximum safe speed are dynamically computed at each present position of said vehicle as it moves over said road, based <u>at least</u> on road geometry for said road forward of said particular position.

Claim 18.    (New)    A method for preventing vehicle rollover for a particular vehicle traveling on a road, said method comprising:

compiling a map database containing road geometry data for at least a road segment of said road;

operating vehicles over said road segment and receiving their speed data as a function of position along said road segment, said speed data being stored in said map database;

determining a maximum safe speed for the particular vehicle for a plurality of points that are distributed along said road segment;

projecting speed of the particular vehicle as a function of position within said road segment, based on an assumption regarding relative driving speed behavior of an operator of the particular vehicle compared to said statistical speed data for said road segment, as stored in said map; and

generating a warning for any point in time at which the projected future speed of the particular vehicle exceeds said maximum safe speed at any point within said road segment.

Claim 19. (New) The method according to Claim 18, further comprising:

determining a continuous safe speed curve based on optimal control parameters for the particular vehicle as determined by a cost function that penalizes at least high lateral accelerations; and

generating said warning for any present point in time for which projected future speed of the particular vehicle exceeds said continuous safe speed curve at any future position of the particular vehicle along said road segment.